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Clarity DIAGNOSTICS

Clarity Plus

Blood Glucose Monitoring System

User's Manual



Blood Glucose Monitoring System

Self monitoring of blood glucose (SMBG) is an integral part of diabetes care, but the high cost of testing can make this impossible. At *Clarity*, our goal is to provide high quality glucose monitoring at a price that allows you to test as often as necessary. Together, we can better manage your diabetes and help you live a longer and healthier life.

Welcome, and thank you for choosing the Clarity Plus Blood Glucose Monitoring System. The Clarity Plus Blood Glucose Monitoring System will give you accurate blood glucose results in just a few simple steps.

To ensure accurate results from your Clarity Plus Blood Glucose Monitoring System, please follow these guidelines:

- Read instructions before use.
- Use the code chip that accompanies each box of test strips.
- Use only Clarity Plus Blood Glucose Test Strips with the Clarity Plus Blood Glucose Meter.
- For *in vitro* diagnostic use only. Your blood glucose monitoring system is to be used only outside the body for testing purposes.
- For self testing and professional use.
- Test only whole blood samples with the Clarity Plus Blood Glucose Test Strips and Meter.
- For self-testers, consult your physician or diabetes healthcare professional before making any adjustments to your medication, diet or activity routines.
- Keep out of reach of children.
- For help with any additional questions or issues, please contact Customer/Technical support at 1-(877)-485-7877.

By following the instructions outlined in this User's Manual, you will be able to use your Clarity Plus Blood Glucose Monitoring System to monitor your blood glucose and better manage your diabetes.

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Getting Started

Before testing, read the instructions carefully and learn about all the components of your Clarity Plus Blood Glucose Monitoring System. Depending on the Clarity Plus product you purchase, some of the components may need to be purchased separately. Please check the list of contents on the outer box for details on which components are included with your purchase.



Blood Glucose Meter



Test Strips



Code Chip



Lancing Device



Clear Cap



Sterile Lancet



Control Solution



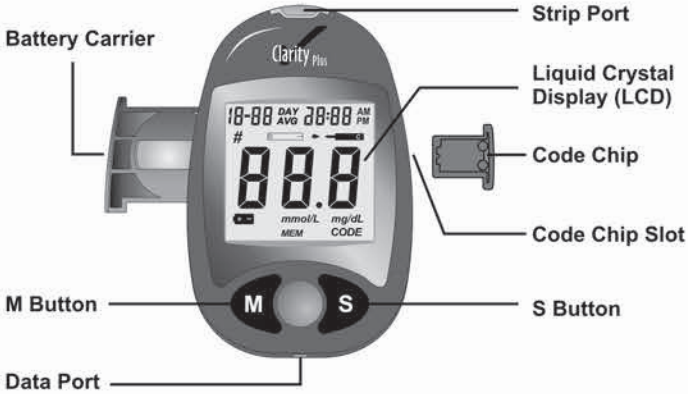
Carrying Case

Component Descriptions

1. Blood Glucose Meter: Reads the test strips and displays the blood glucose concentration.
2. Test Strips: Strips with a chemical reagent system used with the meter to measure glucose concentration in blood.
3. Code Chip: Automatically calibrates the meter with the code number when inserted into the meter.
4. Lancing Device: Used with sterile lancets to prick the fingertip, palm (at the base of the thumb) or forearm for blood sample collection. The packaged lancing device has multiple depth settings, allowing users to adjust the depth of the puncture and minimize discomfort.
5. Clear Cap: Used with the lancing device and sterile lancet to draw blood sample from the forearm and palm.
6. Sterile Lancets: Used with the lancing device to draw a blood sample. Sterile lancets are inserted into the lancing device with each blood draw and discarded after use.
7. Control Solution: Verifies the proper operation of the blood glucose monitoring system by checking the test strips and meter against a precalibrated control solution. The two levels of control solution, Low Control and the High Control are available in the Clarity Plus Glucose control solution package sold seperately.
8. Carrying Case: Provides portability for blood glucose testing wherever you go.
9. User's Manual: Provides detailed instructions on using the blood glucose monitoring system.
10. Quick Reference Guide: Provides a brief overview of the blood glucose monitoring system and testing procedures. This small guide can be kept in your carrying case.
11. Logbook: Allows users to record their blood glucose data and get a better picture of their broader trends.
12. Warranty Card: Should be completed and returned to Clarity Diagnostics to qualify for the 5-year meter warranty.

Clarity Plus Blood Glucose Meter

The meter reads the test strips and displays the blood glucose concentration. Use this diagram to become familiar with all the parts of your meter.



Liquid Crystal Display (LCD): Shows your test results, and helps you through the testing process.

M Button: Recalls previous test results from the meter memory and performs other menu selection functions.

S Button: Selects meter settings, performs other menu selection functions.

Strip Port: Test strips are inserted into this area to perform a test.

Battery Carrier: The battery carrier is located on the back of the meter.

Code Chip Slot: Insert the code chip here.

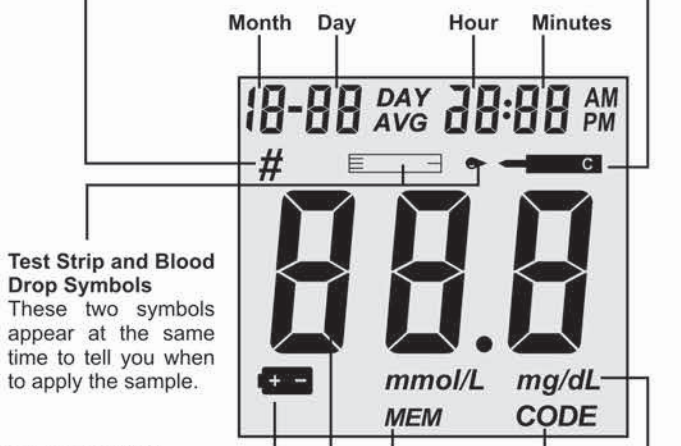
Code Chip: For coding the meter. A new code chip comes with every box of test strips.

Data Port: Not Currently Available for Use.

Meter Display

Pound Sign (#)
Appears with the control solution test result or when you mark an invalid result to prevent it from being included in the averages.

Control Solution Symbol
Indicates a control test result. A pound sign (#) will also be displayed when control solution symbol appears.



Test Strip and Blood Drop Symbols
These two symbols appear at the same time to tell you when to apply the sample.

Battery Symbol
Warns when you should replace the battery.

Test Result Area
Indicates code number and test result.

MEM
Shows a test result stored in memory.

CODE
Appears with the code number of the test strips.

Measurement Unit
Only one unit will be displayed on your meter and cannot be adjusted.

Meter Use and Precautions

- The meter is pre-set to display blood glucose concentration in milligrams per deciliter (mg/dL) . This unit of measure cannot be adjusted.
- Do not get water or other liquids inside the meter.
- Keep the strip port area clean.
- Keep your meter dry and avoid exposing it to extremes in temperature or humidity. Do not leave it in your car.
- Do not drop the meter or get it wet. If you do drop the meter or get it wet, check the meter by running a quality control test. Refer to **Quality Control Test** on page 14 for instructions.
- Do not take the meter apart. Taking the meter apart will void the warranty.
- Refer to the **Caring for Your Meter** section on page 28 for details on cleaning the meter.
- Keep the meter and all associated parts out of reach of children.
- Note: Follow proper precautions and all local regulations when disposing of the meter and used batteries.

Clarity Plus Blood Glucose Test Strips

The Clarity Plus Blood Glucose Test Strips are thin strips with a chemical reagent which work with the Clarity Plus Blood Glucose Meter to measure the glucose concentration in whole blood. After the strip is inserted into the meter, blood is applied to the sample tip of the test strip, then automatically absorbed into the reaction cell where the reaction takes place. A transient electrical current is formed during the reaction and the blood glucose concentration is calculated based on the electrical current detected by the meter, then the result is shown on the meter display. The meter is calibrated to display plasma equivalent results.

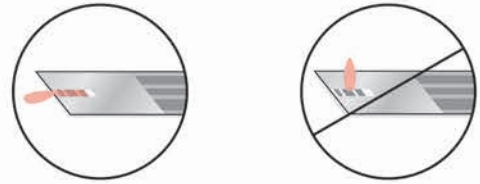
Sample Tip
Apply blood or control solution here.



Check Window
Check to confirm that sufficient sample has been applied.

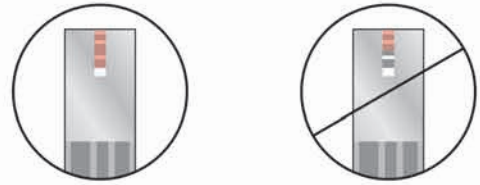
Contact Bars
Insert this end of the test strip into the meter until it stops.

IMPORTANT: Apply sample only to the sample tip of the test strip. Do not apply blood or control solution to the top of the test strip as this may result in an inaccurate reading.



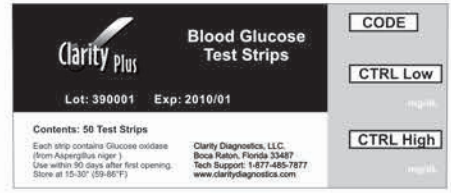
Correct **Incorrect**

Hold the blood drop to the sample tip of the test strip until the check window is full and until the meter begins to count down. If the check window does not fill, do not add more blood to the test strip. You may get an E-5 message or an inaccurate test result. Discard the strip and retest. Even if the meter begins to countdown but the check window does not fill, discard the strip and begin the test again with a fresh test strip.



Correct **Incorrect**

Code Number



Each package of test strips is printed with a code number (CODE), lot number (Lot), unopened expiration date (Exp) and Low and High Control.

Storage and Handling

Please review the following storage and handling instructions:

- Store test strips in a cool, dry place at room temperature, 15-30°C (59-86°F). Store them away from heat and direct sunlight.
- Do not freeze or refrigerate.
- Do not store or use test strips in a humid place such as a bathroom.
- Do not store the meter, the test strips or control solution near bleach or cleaners that contain bleach.
- Replace the cap on the test strip vial immediately after removing a test strip.
- The test strip should be used immediately after removing it from container.
- Do not use your test strips past the unopened expiration date printed on the label. Using test strips past the unopened expiration date may produce incorrect test results.
  Note: The expiration date is printed in Year/Month format. 2010/01 means January, 2010.

Special Instructions for Test Strip in the Vial

- Test strips should be stored tightly capped in their protective vial to keep them in good working condition.
- Do not store test strips outside their protective vial. Test strips must be stored in the original vial with the cap tightly closed.
- Do not transfer test strips to a new vial or any other container.
- Replace the cap on the test strip vial immediately after removing a test strip.
- A new vial of test strips may be used for 3 months after first being opened. The opened expiration date is 3 months after the date the vial was first opened. Write the opened expiration date on the vial label after opening. Discard the vial 3 months after you first open it, usage after this period may result in inaccurate readings.

Test Strip Precautions

- For *in vitro* diagnostic use. Test strips are to be used only outside the body for testing purposes.
- Do not use test strips that are torn, bent, or damaged in any way. Do not reuse test strips.
- Before running a blood glucose test, make sure that the code number on the meter display matches the number shown on the test strip vial.
- Keep the test strip vial away from children and animals.
- Consult your physician or healthcare professional before making any changes in your treatment plan based on your blood glucose test results.

See the test strip insert for more details.

Clarity Plus Glucose Control Solution

The Clarity Plus Glucose Control Solution contains a known concentration of glucose. It is used to confirm that your Clarity Plus Blood Glucose Meter and Test Strips are working together properly and that you are performing the test correctly. It is important to run a quality control test regularly to make sure you are getting correct results.



You should run a quality control test:

- Before you first use your meter, to familiarize yourself with its operation.
- Before using a new box of test strips.
- When you suspect that the meter or test strips are not working properly.
- When you suspect that your test results are inaccurate, or if they are inconsistent with how you feel.
- When you suspect your meter is damaged.
- After cleaning your meter.
- At least once a week.

Refer to **Quality Control Test** on page 14 for instructions on running a quality control test.

Storage and Handling

Please review the following storage and handling instructions:

- Store the control solution at room temperature, 15-30°C (59-86°F).
- Do not refrigerate or freeze.
- If the control solution is cold, do not use until it has warmed to room temperature.
- Use before the unopened expiration date that is shown on the bottle.
  Note: The expiration date is printed in Year/Month format. 2010/01 means January, 2010.
- Each bottle of control solution can be used for 3 months after you first open it. The control solution will expire 3 months after the bottle is opened for the first time. Record this opened expiration date on the bottle label.

Control Solution Precautions

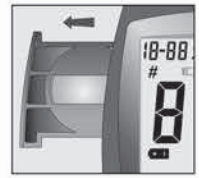
- For *in vitro* diagnostic use. The control solution is for testing only outside the body. Do not swallow or inject.
- Shake well before using.
- Control solution tests are specified to be accurate only when tested between 15 and 40°C (59-104°F).
- The control ranges shown on the test strip vial are not recommended ranges for your blood glucose level. Your personal blood glucose target ranges should be determined by your diabetes healthcare professional.
- Do not touch the test strip with the tip of the control solution bottle.
- Use only the same brand of control solution that was provided with your kit.

See the control solution insert for more details.

Install the Battery

Battery may not be preinstalled in the meter. One CR 2032 3.0V coin cell battery is required. Please find the battery in your carrying case and install it according to following steps:

1. Pull the battery carrier on the left side of the meter. The battery carrier should be easily opened with your finger.



2. Place a fresh CR 2032 3.0V coin cell battery. Make sure it is aligned with the (+) side facing up in the battery carrier.



3. Close the battery carrier and make sure that it snaps shut.

Meter Setup Before Testing

Before testing, the following steps should be followed:

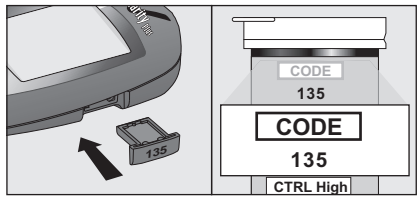
Step 1 - Coding the Meter

Simply insert the code chip to code the meter. Every time you change to a new box of test strips, you need to insert the code chip packed with the new box of test strips. You can see the code number appears on the meter. Make sure this number matches the code number printed on the test strip vial label and the number printed on the code chip.

You can easily find a code chip in your starter kit box. This code chip is used with the test strip packed in your carrying case when you first open the carrying case. If there is already one code chip inserted, remove it and insert the new code chip.

1. Take the code chip from the test strip box. Compare the code number on the code chip with the code number printed on the test strip vial label. If the two numbers are not identical, you may get inaccurate results. If the code number on the code chip does not match the number on the vial of strips with which it was packaged, please contact Clarity Diagnostics immediately.

2. With your meter turned off, insert the new code chip into the code chip slot of the meter. It should easily snap into place. The code chip should remain in the meter, do not take it out until you change to another new box of test strips.

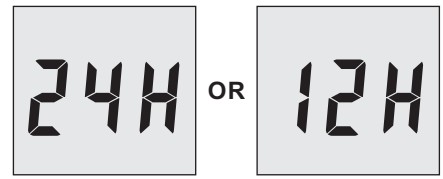


Note: If a test strip is inserted and no strip code is stored in memory, the display will flash "- - - CODE".

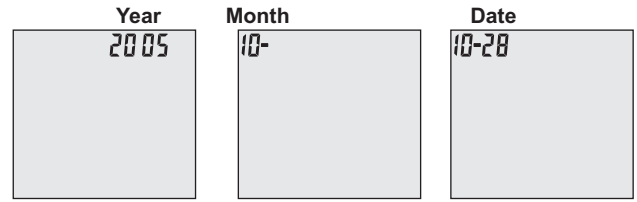
Step 2 - Adjusting the Meter Settings

Adjust the meter settings to set the clock, ensuring that results stored in the memory are shown with the correct date and time. You can also turn the meter audio feature on or off. You need to adjust the meter settings before you first use your meter.
You will need to set the clock settings after replacing the battery.

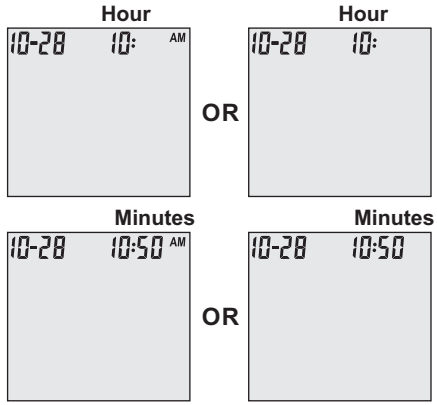
1. Press the S button to enter the meter setup mode. The meter will automatically enter the setup mode when turned on for the first time by any method.
2. First, set the clock for either 12 or 24 hour mode. Press the M button to switch between the two settings, then press the S button to save your choice and start setting the year, month and date.



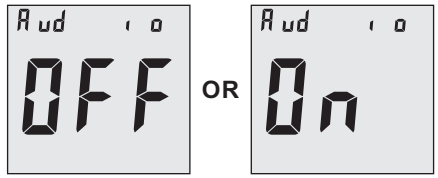
3. The year will appear at the top of the display. Press the M button until the correct year is displayed. Once you have selected the correct year, press the S button to save your choice and start setting the month. Press the M button until the correct month is displayed, then press the S button to save your choice and start setting the date. Press the M button until the correct date is displayed, then press the S button to save your choice and start setting the time.



4. The hour will appear at the top of the display. Adjust the hour with the M button until the correct hour is displayed. Press the S button to save your choice and set the minutes. Press the M button to change to the correct minute. Press the S button to save your choice and move to set the audio feature.



5. Audio Feature
   The meter comes with the meter audio feature enabled. The meter will give one short beep when it is turned on, after sufficient sample has been applied to the test strip and when the result is ready. The meter will sound three short beeps to sound a warning when an error has occurred. Please check the error number on the display to confirm what kind of error has occurred.
   Press the M button to switch between turning the meter beep "On" and "Off". Press the S button to confirm your selection. Pressing S at this point will end the setup mode and power off the meter.

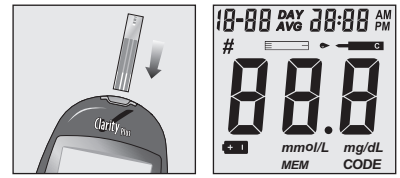


Performing a Quality Control Test

The quality control test confirms that the test strips and meter are working together properly, and that you are performing the test correctly. It is important to perform this test:

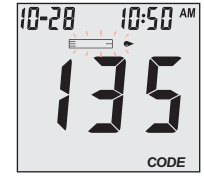
- Before you first use your meter, to familiarize yourself with its operation.
- Before using a new box of test strips.
- When you suspect that the meter or test strips are not working properly.
- When you suspect that your test results are inaccurate, or if they are inconsistent with how you feel.
- When you suspect your meter is damaged.
- After cleaning your meter.
- At least once a week.

1. Insert a test strip into the strip port, contact bars end first and facing up, to turn on the meter and display all the display segments. If the audio option is on, the meter will beep, signaling the meter is turned on.



2. Check the display to confirm that all the display segments turn on (see display illustration above).

3. Following this display check, the system will enter the test mode. The display will show the date and time and the strip icon with the blood sample icon blinking. The code number will be displayed in the center of the screen. Make sure that the code number that appears on the display matches the code number (CODE) on the test strip vial. If not, make sure to locate and insert the code chip that came with the box of strips. If the codes still do not match, do not perform a test. You will need a new package of test strips to perform a test.



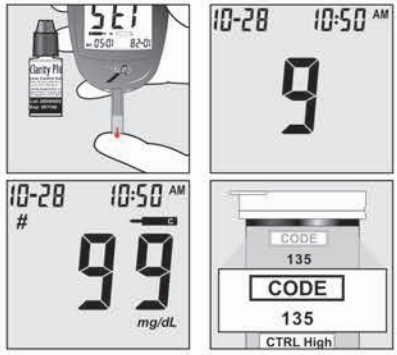
   The blinking test strip and blood drop icon indicates that the test strip is inserted correctly and a drop of control solution can be added.
   Note: If the test strip has been inserted incorrectly, the meter will not turn on.

4. Press the M button to mark the test as a control solution test. Once the M button is pressed, the control solution symbol will appear on the display.



5. Shake the control solution bottle well, then squeeze it gently and discard the first drop. If the tip clogs, tap the tip gently on a clean, hard surface, shake again, and then use. Squeeze the vial again to get another drop and place the drop on your finger tip or other clean non absorbent surface first. Then apply the drop to the sample tip of the test strip, or touch the sample tip of the test strip to the control solution drop. If the audio option is turned on, the meter will beep to indicate a sufficient sample has been applied.
   Notes:
   - Do not apply control solution to the test strip directly from the bottle.
   - If the control solution sample does not fill the check window, do not add a second drop. Discard the test strip and start over with a new test strip.

6. Once sufficient sample has been applied, the meter display will count down from 9 to 1 and then display the result. The control solution test results should be within the control range (CTRL Low) printed on the test strip vial. This means that your blood glucose monitoring system is working properly and that you are performing the procedure correctly.



Test results are displayed in mg/dL.

7. Remove and discard the test strip.
   The display should also show a pound sign (#) indicating the test is a control solution test. This shows that the number will not be counted in the 7, 14 and 30-day averages. The pound sign (#) will also be displayed when reviewing the results stored in memory.
   If the result falls outside the indicated control range:
   - Confirm you are matching the correct range. Low Control results should be matched to the Control Low range printed on the test strip vial.
   - Check the expiration date of the test strip and control solution. Make sure that the test strip vial and control solution bottle have not been opened for more than 3 months. Discard any test strips or control solution that has expired.
   - Confirm the temperature in which you are testing is between 15 and 40℃(59-104℉).
   - Make sure that the test strip vial and control solution bottle have been tightly capped.
   - Make sure code number on the strip vial label matches the code number that appears on the meter display.
   - Confirm that you are using the same brand of control solution that was provided with your kit.
   - Make sure that you followed the test procedure correctly.

After checking all of the conditions listed above, repeat the quality control test with a new test strip. If your results still fall outside of the control range shown on the test strip vial, your meter may be defective. Contact Clarity Customer/Technical Support at 1-(877)-485-7877.

Two levels of Control solutions are available labeled Low Control and High Control. The ranges for both (Low and High Control) are displayed on the test strip vial. For confirmation of results, Low Control results should fall within the Low control range, and High control results should fall within the High control value range. If the control solution test results do not fall within the respective ranges, DO NOT use the system to test blood, as the system may not be working properly. If you cannot fix the problem, contact Clarity Customer/Technical support at 1-(877)-485-7877.
Please contact Clarity for information on ordering the Clarity Plus Glucose Control Solution Kit, which contains Low and High Controls.

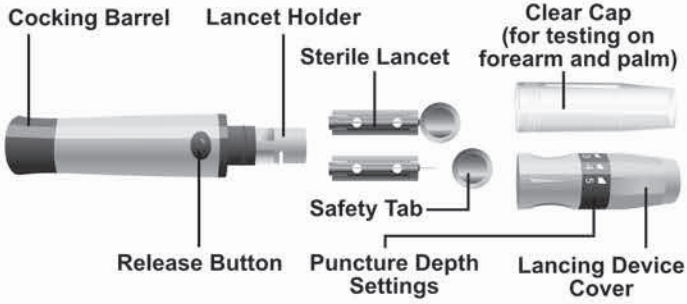
Testing Your Blood

The following steps show how to use the meter, test strips, lancing device and sterile lancets together to measure your blood glucose concentration.

Step 1 - Getting a Drop of Blood

The Clarity Plus Blood Glucose Monitoring System requires a very small sample of blood which may be obtained from the fingertip, palm (at the base of the thumb) or forearm. See page 20 for information on obtaining a blood sample from the palm or forearm. Before testing, choose a clean, dry work surface. Familiarize yourself with the procedure and make sure you have all the items needed to obtain a drop of blood.

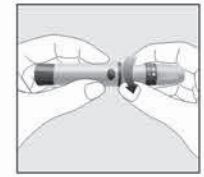
IMPORTANT: Prior to testing, wipe the test site with an alcohol swab or soapy water. Use warm water to increase blood flow if necessary. Then dry your hands and the test site thoroughly. Make sure there is no cream or lotion on the test site.

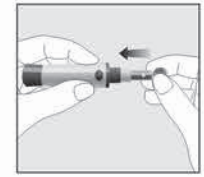


Fingertip Testing

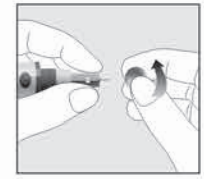
For fingertip sampling, adjust the depth penetration to reduce the discomfort. You do not need the clear cap for fingertip sampling.

1. Unscrew the lancing device cover from the body of the lancing device. Insert a sterile lancet into the lancet holder and push it until the lancet comes to a complete stop in the lancet holder.

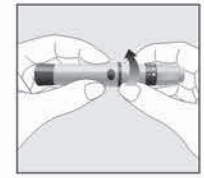




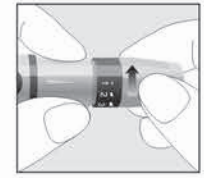
2. Hold the lancet firmly in the lancet holder and twist the safety tab of the lancet until it loosens, then pull the safety tab off the lancet. Save the safety tab for lancet disposal.



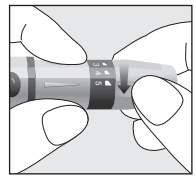
3. Carefully screw the cover back onto the lancing device. Avoid contact with the exposed needle. Make sure the cover is fully sealed on the lancing device.



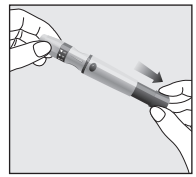
4. Adjust the puncture depth by rotating the lancing device cover. There are a total of 5 puncture depth settings. To reduce the discomfort, use the lowest setting that still produces an adequate drop of blood.
Adjustment:



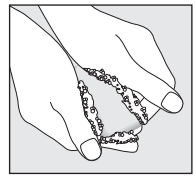
1 and 2 for delicate skin
3 for normal skin
4 and 5 for calloused or thick skin
Note: Greater pressure of the lancing device against the finger will also increase the puncture depth.

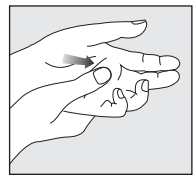


5. Pull the cocking barrel back to set the lancing device. You may hear a click. The device is now loaded and ready for obtaining a drop of blood.



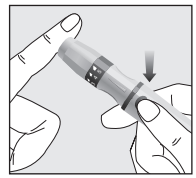
6. Prior to testing, wipe your hand with an alcohol swab or wash your hands with soap. Use warm water to increase blood flow in your fingers if necessary. Then dry your hands thoroughly. Massage the hand from the wrist up to the fingertip a few times to encourage blood flow.

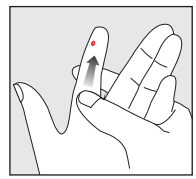




7. Hold the lancing device against the side of the finger to be lanced with the cover resting on the finger. Push the release button to prick your fingertip. You should hear a click as the lancing device activates. Gently massage from the base of the finger to the tip of the finger to obtain the required blood volume. Avoid smearing the drop of blood.

For the greatest reduction in pain, lance on the sides of the fingertips. Rotation of sites is recommended. Repeated punctures in the same spot can make your fingers sore and calloused.





Forearm or Palm (at the base of the thumb) Testing

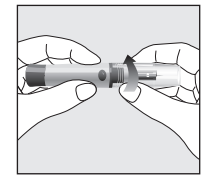
The forearm and palm areas have fewer nerve endings than the fingertip so you may find that obtaining blood from these sites is less painful than from the fingertip. The technique for forearm and palm sampling is different. You need the clear cap to draw blood from these sites. The clear cap is not adjustable for puncture depth.

IMPORTANT: There are important differences between forearm, palm and fingertip samples that you should know. Important information about forearm and palm glucose testing:

- When blood levels are changing rapidly such as after a meal, insulin dose or exercise, blood from the fingertips may show these changes more rapidly than blood from other areas.
- Fingertips should be used if testing is within 2 hours of a meal, insulin dose or exercise and any time you feel glucose levels are changing rapidly.
- You should test with the fingertips anytime there is a concern for hypoglycemia or you suffer from hypoglycemia unawareness.

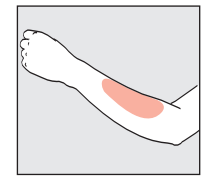
Please refer to **Fingertip Testing** to insert the lancet and load the lancing device.

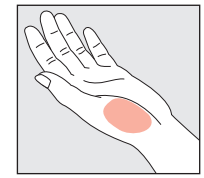
1. Screw the clear cap onto the lancing device.



2. Choose a puncture site on the forearm or palm. Select a soft, fleshy area of the forearm that is clean and dry, away from bone, and free of visible veins and hair.

   To bring fresh blood to the surface of the puncture site, massage the puncture site vigorously for a few seconds until you feel it getting warm.





3. Place the lancing device against the puncture site. Press and hold the clear cap against the puncture site for a few seconds. Press the release button of the lancing device, but **do not immediately lift the lancing device** from the puncture site. Continue to hold the lancing device against the puncture site until you can confirm a sufficient blood sample has formed.

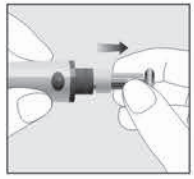


Disposal of the Lancet

1. Unscrew the lancing device cover. Place the safety tab of the lancet on a hard surface and carefully insert the lancet needle into the safety tab.



2. Press the release button to make sure that the lancet is in the extended position. Pull the lancet straight out of the lancet holder and discard it in an appropriate container. Place the lancing device cover back on the lancing device.



Lancet Precautions

- Do not use the lancet if the safety tab is missing or loose when you take the lancet out of the bag.
- Do not use the lancet if the needle is bent.
- Use caution whenever the lancet needle is exposed.
- Never share lancets or the lancing device with other people.
- In order to reduce the risk of infection from prior use of the instrument, always use a new, sterile lancet. Do not reuse lancets.
- Avoid getting the lancing device or lancets dirty with hand lotion, oils, dirt or debris.

Step 2 - Testing Blood Glucose

Note: Insertion of a new test strip at any time, except while in the data transfer mode will cause the meter to automatically enter the test mode.

1. Insert a test strip into the strip port, contact bars end first and facing up, to turn on the meter and display all the display segments. If the audio option is on, the meter will beep, signaling the meter is turned on.



Make sure that the code number that appears on the display matches the code number (CODE) on the test strip vial. If not, make sure to locate and insert the code chip that came with the box of strips. If the codes still do not match, do not perform a test. You will need a new package of test strips to perform a test.



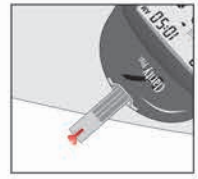
2. The blinking test strip and blood drop icon will indicate that the test strip is inserted correctly and a drop of blood can be added.

3. Touch the blood sample to the sample tip at the end of the test strip. If the audio option is turned on, the meter will also beep to indicate the sample is sufficient and the measurement has started.

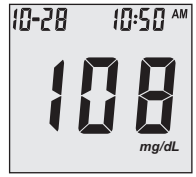


DO NOT:

- Apply sample to the front or back of the test strip.
- Smear the blood drop onto the test strip.
- Press your finger against the test strip.
- Apply a second drop of blood.



4. The meter will count down from 9 to 1 and then display the measurement results. The meter will also beep to indicate that measurement is complete.



   To mark invalid results and to prevent them from being included in the 7, 14 and 30 day averages, press the M and S buttons together. A pound sign (#) will appear on the display to show that the result will not be included when calculating the 7, 14 and 30-day averages. If a result is marked by accident, press the M and S buttons again to unmark the result. After marking the invalid result, run the test again with a new test strip.

   If an error message appears on the display, refer to the **Troubleshooting Guide** on page 31. If a "HI" or "LO" error appears on the display, refer to "HI" and "LO" messages below.

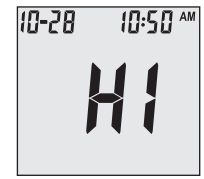
5. After inspection, record valid results in your logbook with the date and time, and compare them to the target goals set by your healthcare professional. Refer to **Suggested Testing Times and Target Goals** on page 29 and your logbook for more details on your target blood glucose concentration goals.

6. Remove and discard the test strip.

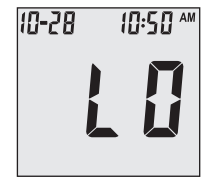
"HI" and "LO" Messages

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The meter can accurately measure blood glucose concentrations between 20 to 600 mg/dL. "HI" and "LO" messages indicate results outside of this range.



If "HI" appears on the display, the measured concentration value is above 600 mg/dL. The test should be retaken to ensure that no mistake was made in the procedure. If you are certain the meter is functioning properly and no mistakes were made in the procedure, and your blood glucose is still consistently measured as "HI", it indicates severe hyperglycemia (high blood glucose). You should contact your healthcare professional immediately.



If "LO" appears on the display, the measured concentration value is below 20 mg/dL. The test should be retaken to ensure that no mistake was made in the procedure. If you are certain the meter is functioning properly and no mistakes were made in the procedure, and your blood glucose is still consistently measured as "LO", it may indicate severe hypoglycemia (low blood glucose). You should treat yourself for hypoglycemia immediately as recommended by your healthcare professional.

Precautions and Limitations

- The meter, test strips and other components have been designed, tested and proven to work together effectively to provide accurate blood glucose measurements. Do not use components from other brands.
- Use only with whole blood. Do not use with serum or plasma samples.
- Do not use for testing newborns.
- Do not use the meter in any manner not specified by the manufacturer. Otherwise, the protection provided by the meter may be impaired.
- Very high (above 55%) and very low (below 30%) hematocrit can cause false results. Talk to your healthcare professional to find out your hematocrit level.

- Abnormally high levels of Vitamin C (ascorbic acid), Acetaminophen, Uric Acid, L-Dopa, Tolazamide or other reducing substances will produce falsely high blood glucose measurements.
- Fatty substances (Triglycerides up to 3,000 mg/dL or Cholesterol up to 500 mg/dL) have no major effect on blood glucose test results.
- The Clarity Plus Blood Glucose Monitoring System has been tested and shown to work properly up to 8,516 ft (2,595 meters).
- Severely ill persons should not run the glucose test with the Clarity Plus Blood Glucose Monitoring System.
- Blood samples from patients in shock, or with severe dehydration or from patients in a hyperosmolar state (with or without ketosis) have not been tested and are not recommended for testing with Clarity Plus Blood Glucose Monitoring System.
- Dispose of blood samples and materials carefully. Treat all blood samples as if they are infectious materials. Follow proper precautions when disposing of materials.

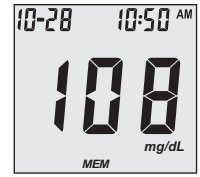
Using the Meter Memory

The meter automatically stores up to 300 test records. Each record includes the test result, time and date. If there are already 300 records in memory, the oldest record will be erased to make room for a new one.
The meter will also calculate the average values of records from the last 7, 14 and 30 days.

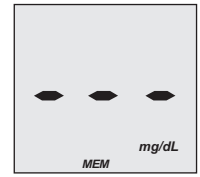
Viewing Stored Records

To view stored records:

1. Press the M button to turn the meter on and enter memory mode. The most recent value and the word "MEM" will appear on the display.



   If you are using the meter for the very first time, the meter display will show three dashed lines (---), the word "MEM" and the unit of measure. This shows that no data have been stored in memory.



2. The date and time will be displayed together with the results stored in memory. A pound sign (#) indicates records that will be omitted from the 7, 14 and 30 day averages.

3. Press the M button to go through the stored records.

4. Press the S button to view the data averages. The words "DAY AVE" will appear on the screen.
   Note: If you do not wish to view your average glucose measurements, you can press the S button again to turn off the display.

5. While in memory mode, press the M button to switch between the 7, 14 and 30 day averages. The meter will calculate the average that you selected. The number of records used in the DAY AVE will also appear in the display.



6. If there are fewer than 7, 14 or 30 days in memory, all the unmarked readings currently stored in memory will be averaged instead.

   If you are using the meter for the very first time, no value will appear on the display. This means that no records have been stored in memory.

7. Press the S button to turn off the display.
   Note: Results from quality control tests will not be included in the averages. When viewing results in memory, these values are marked with a pound sign (#) to show that they will not be included in the 7, 14 and 30 day averages.

Clearing the Memory

Extreme caution should be used when clearing the memory. This is not a reversible operation. To clear the memory:

1. With the meter powered off, press and hold the M button for three seconds. This will turn on the meter and enter the delete mode.

2. To clear the memory, press and hold both the M and S buttons for two seconds.

3. The display will show "MEM" and "---", the meter will clear its memory and after a moment turn itself off.

4. If you entered the delete mode but want to exit without deleting the recorded data, press the S button. This will turn the meter off without deleting any data.



Maintenance

Proper maintenance is recommended for best results.

Replacing the Battery

When the battery icon (▬) appears, it means the battery is running low and you should replace the battery as soon as possible. An "E-6" error message will appear if the battery is too low to perform any more blood glucose tests. The meter will not function until the battery is replaced.
Instructions:



1. Make sure the meter is off before removing the battery.
2. Pull the battery carrier on the left side of the meter. The battery carrier should be easily opened with you finger.
3. Remove and discard the old battery. Replace it with a fresh CR 2032 3.0V coin cell battery. Make sure it is aligned with the (+) side facing up in the battery carrier.
4. Close the battery carrier and make sure that it snaps shut.
5. Recheck and reset the clock setting as necessary after battery replacement to ensure time is set correctly. To set the meter clock, see **Meter Setup Before Testing** on page 11.

Caring for Your *Clarity Plus* Blood Glucose Monitoring System

Blood Glucose Meter

Your Clarity Plus Blood Glucose Meter does not require special maintenance or cleaning. A cloth dampened with water and a mild detergent solution can be used to wipe the outside of the meter. Take care to avoid getting liquids, dirt, blood or control solution into the meter through the strip or data ports. It is recommended that you store the meter in the carrying case after each use.
The Clarity Plus Blood Glucose Meter is a precision electronic instrument. Please handle it with care.

Lancing Device

Use mild soap and warm water to clean with a soft cloth as required. Carefully dry the device thoroughly. Do not immerse the lancing device. Please refer to the lancing device insert for more details.

Suggested Testing Times and Target Goals

Tracking your blood glucose concentration through frequent testing is an important part of proper diabetes care. Your diabetes health care professional will help you to decide the normal target range for your glucose levels. They will also help you determine when and how often to test your blood glucose. Some suggested times are:

- When you wake up (fasting level)
- Before breakfast
- 1-2 hours after breakfast
- Before lunch
- 1-2 hours after lunch
- Before or after exercise
- Before dinner
- 1-2 hours after dinner
- Before bedtime
- After a snack
- At 2 or 3 AM, if taking insulin

You may need to test more often whenever[1]:

- You add or adjust your medication for diabetes.
- You think your blood glucose levels may be too low or too high.
- You are ill, or feeling uncomfortable over long periods of time.

Expected blood glucose levels for people without diabetes:[2]

Time	Range, mg/dL
Fasting and Before Meals	70 - 100
2 Hours after Meals	Less than 140

Time of Day	Your Target Range
Waking up (Fasting level)	
Before meals	
2 hours after meals	
Bedtime	
2 AM to 3 AM	
Other	

Use the logbook to record your blood glucose measurements and related information. Bring the logbook with you when visiting your physician so that you can determine how well your blood glucose is being controlled. This can help you and your health care professional make the best decisions about your glucose control plan.

1. Jennifer Mayfield and Stephen Havas, "Self-Control: A Physician's Guide to Blood Glucose Monitoring in the Management of Diabetes An American Family Physician Monograph"
2. ADA Clinical Practice Recommendations, 2003.

Comparing Meter and Laboratory Results

Your Clarity Plus Blood Glucose Monitoring System and laboratory results both report the glucose concentration in the serum or plasma component of your blood. However, the results may differ somewhat due to normal variation. This is expected, but the difference under normal operating conditions should be no greater than 20%. To ensure a reasonable comparison, follow these guidelines.

Before you go to the lab:

- Bring your meter, test strip and control solution with you to the lab.
- Make sure your meter is clean.
- Perform a quality control test to make sure the meter is working properly.
- Comparisons will be more accurate if you do not eat for at least four hours (preferably eight hours) before testing.

At the lab:

- Wash your hands before obtaining a blood sample.
- Obtain blood samples for a laboratory test and for your meter within 10 minutes of each other. This will ensure an accurate comparison of results.
- Never use your meter with blood that has been placed in test tubes containing fluoride or other anticoagulants. This will cause falsely low results.

Troubleshooting Guide

The meter has built-in messages to alert you of problems. When error messages appear, note the error number, turn off the meter and then follow these instructions.

Display	Causes	Solution
Meter fails to turn on	Battery may be damaged or not be charged	Replace battery.
	Meter is too cold	If meter has been exposed to or stored in cold conditions, wait 30 minutes to allow meter to reach room temperature then repeat test.
E-0	Power On self check error	Remove battery for 30 seconds and then put battery back and turn meter on again. If problem persists, If problem persists, contact Clarity Customer/Technical support.
E-1	Internal calibration check error	If a cell phone, radio frequency source or a high power electrical source is nearby, place more distance between the meter and any of these sources then retest. If the problem persists, contact Clarity Customer/Technical support.
E-2	Test strip was removed during the test	Repeat the test and ensure test strip remains in place.
E-3	Sample was applied to the test strip too soon	Repeat test and apply sample after blood drop/test strip icon appears.
E-4	Test strip is contaminated or used	Repeat test with a new test strip.
E-5	Insufficient sample	Repeat test and apply enough sample to fill the test strip check window.
HI t	Temperature has exceeded the operating temperature of the system	Move to a cooler environment and repeat the test.

Display	Causes	Solution
LOt	Temperature is below the operating temperature of the system	Move to a warmer environment and repeat the test.
	Battery is discharged but has enough power to run 10 more tests	Test results will still be accurate, but replace the battery as soon as possible.
E-6	Battery has discharged and meter does not allow more tests until replacement with a new battery	Replace the battery and repeat the test.
	No code chip in the meter	Insert the code chip that accompanied the box of test strips.
E-7	Damaged code chip or the code chip was removed during a test	If the code chip is damaged, use a new code chip with the correct code number and run the test. If the chip is removed during a test, confirm the code chip matches the test strip code and repeat the test. If problem persists, contact Clarity Customer/Technical support.
E-8	Meter electronics failure	If problem persists, contact Clarity Customer/Technical support.
E-9	Incorrect code chip inserted in the meter	Indicates an incorrect code chip was inserted in the meter. Please make sure you use the Clarity Plus brand of test strips with the Clarity Plus Blood Glucose Meter. If problem persists, contact Clarity Diagnostics Customer/ Technical support.
E 10	Communications failure	There is an error in transferring data to the PC. See the package insert included with the Data Management Kit for troubleshooting.

For help with any additional questions or issues, Please contact Clarity Diagnostics Customer/Technical support at 1-(877)-485-7877.

Specifications

Feature	Specification
Measurement Range	20 to 600 mg/dL
Result Calibration	Plasma-equivalent
Sample	Fresh capillary whole blood
Minimum Sample Size	1 µL
Test Time	10 seconds
Power Source	One (1) CR 2032 3.0V coin cell battery
Battery Life	12 months or approximately 1,000 tests
Glucose Units of Measure	The meter is pre-set to milligrams per deciliter (mg/dL)
Memory	Up to 300 records with time and date
Meter Size	85mm x 54mm x 20.5mm
Display Size	35mm x 32.5mm
Weight	Approximately 49.5 g (with battery installed)
Operating Temperature	5-45°C (41 - 113°F)
Operating Relative Humidity	20-90% (non-condensing)
Hematocrit Range	30-55%

Warranty

Please complete the warranty card that came with this product and mail it to Clarity Diagnostics to register your purchase.
If the meter fails to work for any reason other than obvious abuse within the first five (5) years from purchase, we will replace it with a new meter free of charge. For your records, also write the purchase date of your product here.
Date of purchase: _____
Note: This warranty applies only to the meter in the original purchase, and does not apply to the battery supplied with the meter.

En

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